

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claim 1 (canceled)

Claim 2 (currently amended): A fusion protein comprising ~~alpha 1-antitrypsin or~~ a functionally active portion of alpha 1-antitrypsin thereof, and ~~secretory leukocyte protease inhibitor or~~ a functionally active portion of secretory leukocyte protease inhibitor thereof, wherein said fusion protein has alpha 1-antitrypsin protease inhibitor activity and secretory leukocyte protease inhibitor activity.

Claim 3 (canceled)

Claim 4 (currently amended): ~~The fusion protein of claim 2;~~ A fusion protein comprising

- a) amino acids from about 1 to about 394 of SEQ ID NO: 2 ; and
- b) amino acids from about 1 to about 107 of SEQ ID NO: 4, wherein said fusion protein has alpha 1-antitrypsin protease inhibitor activity and secretory leukocyte protease inhibitor activity.

Claim 5 -7 (canceled)

Claim 8 (currently amended): A pharmaceutical composition comprising the fusion protein of claim 2, ~~4, 42, 43 or 44~~, admixed with a pharmaceutically acceptable vehicle.

Claim 9-15 (canceled)

Claim 16 (previously presented): The fusion protein of claim 4 wherein the carboxy terminus of amino acids from about 1 to about 394 of SEQ ID NO: 2 is linked to the amino terminus of amino acids from about 1 to about 107 of SEQ ID NO: 4.

Claim 17 (previously presented): The fusion protein of claim 4 wherein the carboxy terminus of amino acids from about 1 to about 107 of SEQ ID NO: 4 is linked to the amino terminus of amino acids from about 1 to about 394 of SEQ ID NO: 2.

Claim 18-25 (canceled)

Claim 26 (withdrawn): A method for inhibiting protease activity, comprising contacting the protease with the fusion protein of claims 2 or 4.

Claim 27 (withdrawn): The method of claim 26 wherein the protease activity is associated with a disorder selected from the group consisting of emphysema, asthma, chronic obstructive pulmonary disease, cystic fibrosis, otitis media, and otitis externa.

Claim 28 (withdrawn): The method of claim 26, wherein the protease activity is associated with HIV infection.

Claim 29 (withdrawn): The method of claim 26, wherein the fusion protein is contacted with the protease by administering the fusion protein to an individual having the protease.

Claim 30 (withdrawn): A method of treating an individual suffering from, or at risk for, a disease or disorder involving unwanted protease activity comprising administering to the individual an effective amount of the fusion protein of claims 2-or 4.

Claim 31 (withdrawn): The method of claim 30, wherein the individual suffers from emphysema.

Claim 32 (withdrawn): The method of claim 30, wherein the individual suffers from asthma.

Claim 33 (withdrawn): The method of claim 30, wherein the individual suffers from chronic obstructive pulmonary disease.

Claim 34 (withdrawn): The method of claim 30, wherein the individual suffers from cystic fibrosis.

Claim 35 (withdrawn): The method of claim 30, wherein the individual suffers from otitis media or otitis externa.

Claim 36 (previously presented): The fusion protein of claim 4, comprising SEQ ID NO: 8.

Claim 37 (previously presented): The fusion protein of claim 4, comprising SEQ ID NO: 16.

Claim 38 (withdrawn): A method for inhibiting protease activity, comprising contacting the protease with the fusion protein of claims 36 or 37.

Claim 39 (withdrawn): The method of claim 38 wherein the protease activity is associated with a disorder selected from the group consisting of emphysema, asthma, chronic obstructive pulmonary disease, cystic fibrosis, otitis media, and otitis externa.

Claim 40 (withdrawn): A method for inhibiting protease activity, comprising contacting the protease with the fusion protein of claim 2.

Claim 41 (withdrawn): A method for inhibiting protease activity, comprising contacting the protease with the fusion protein of claim 4.

Claim 42 (currently amended): The fusion protein of claim 2, wherein said ~~alpha 1-antitrypsin~~ or functionally active portion of alpha 1-antitrypsin thereof ~~comprises at least an~~ has elastase inhibitory ~~domain~~ activity and said ~~secretory leukocyte protease inhibitor~~ or functionally active portion of secretory leukocyte protease inhibitor thereof ~~comprises at least a~~ ~~tryptase~~ has elastase inhibitory domain activity.

Claim 43 -45 (canceled)

Claim 46 (new) The fusion protein of claim 42 further comprising tryptase inhibitory activity.

Claim 47 (new) The fusion protein of claim 2 or claim 42, wherein the specific activity of the elastase inhibitory activity of said fusion protein is double the specific activity of the elastase inhibitory activity of AAT.

Claim 48 (new) A pharmaceutical composition comprising the fusion protein of claim 4 admixed with a pharmaceutically acceptable vehicle.

Claim 49 (new) A pharmaceutical composition comprising the fusion protein of claim 42 admixed with a pharmaceutically acceptable vehicle.